



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,902	07/20/2004	Yundong Wang	4662-282	9014

23117 7590 02/16/2007

NIXON & VANDERHYE, PC
901 NORTH GLEBE ROAD, 11TH FLOOR
ARLINGTON, VA 22203

EXAMINER

NUTTER, NATHAN M

ART UNIT	PAPER NUMBER
----------	--------------

1711

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/501,902

Applicant(s)

WANG ET AL.

Examiner

Nathan M. Nutter

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

In response to the amendment filed 28 December 2006, the following is placed in effect.

The rejection of claims 19-21 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, is hereby expressly withdrawn.

The provisional rejection of claims 14, 15 and 17-25 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10 of copending Application No. 10/491,569, is hereby expressly withdrawn.

The rejection of claims 14, 15 and 17-25 under 35 U.S.C. 102(e) as being anticipated by Dozeman et al (US 2005/0085591), is hereby expressly withdrawn.

The rejection of claims 14 and 16-25 under 35 U.S.C. 102(b) as being clearly anticipated by Braga et al (US 5,066,700), is hereby expressly withdrawn.

The rejection of claims 14-17, 19-21, 24 and 25 under 35 U.S.C. 102(b) as being clearly anticipated by Horion (US 5,589,544), is hereby expressly withdrawn.

The rejection of claims 14 and 17-25 under 35 U.S.C. 102(b) as being clearly anticipated by Fischer (US 3,862,106), is hereby expressly withdrawn.

The rejection of claims 14 and 17-25 under 35 U.S.C. 102(b) as being clearly anticipated by Sezaki et al (US 5,081,179), is hereby expressly withdrawn.

The rejection of claims 14, 15 and 17-25 under 35 U.S.C. 102(b) as being clearly anticipated by Hamanaka et al (US 5,187,224), is hereby expressly withdrawn.

Art Unit: 1711

The rejection of claims 14, 15, 17-21, 24 and 25 under 35 U.S.C. 102(e) as being clearly anticipated by Ikawa et al (US 6,617,383), is hereby expressly withdrawn.

The following new rejections are being made.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 14-39 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Wang et al (US 5,963,039), newly cited.

The reference to Wang et al teaches the method, as recited herein, at the Abstract, column 5 (lines 5-27), the paragraph bridging column 2 to column 3 and column 4 (lines 25-45) for the thermoplastic constituents, the paragraph bridging column 4 to column 5 for the use of EPDM rubbers, column 7 (lines 15-28), column 7 (line 65) to column 8 (line 30) for the two-step process that provides a partially cured DVA for addition to a second thermoplastic with subsequent further dynamic vulcanization. Note column 8 (lines 35-48) for the extruders employed. Note Example 1 at column 9 and Table I bridging column 9 to column 10, which shows a first ZnO curing agent and a second phenolic resin curing agent. Finally, the reference teaches at column 3 (lines 34-44) that the "elastomer is desirably at least partially cured (crosslinked) during the

Art Unit: 1711

dynamic vulcanization, and preferably is fully cured or completely cured," which would embrace the limitations of claims 22, 23, 34 and 35.

Claims 14-21, 24-33 and 36-39 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Komatsu et al (US 4,873,288), newly cited.

The reference teaches the method at the Abstract, column 2 (line 59) to column 3 (line 9), column 3 (lines 16) to column 4 (line 41) for the constituents, column 4 (line 57) to column 6 (line 14) for the two-step process and Example 1 at columns 7 and 8.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komatsu et al (US 4,873,288).

The reference teaches essentially what is recited herein except the particular gel contents of claims 22, 23, 34 and 35. It is submitted that, since the second step effects a further dynamic vulcanization that results in a product denoted in the instant patent as "crosslinked" see the claims, the product would certainly give a gel of at least 50%. A skilled artisan would know how to manipulate the degree of crosslinking to provide a

Art Unit: 1711

product suitable for the particular end use to which it may be assigned, and that this would include a high gel content, as recited herein in instant claims 24 and 35. This is deemed true since there is nothing recited in the instant claims that would indicate reasoning for obtaining the high degree of gel content not present in the reference. As such, the skilled artisan would have a high level of expectation of success following the teachings of the reference. Nothing unexpected has been shown on the record.

Response to Arguments

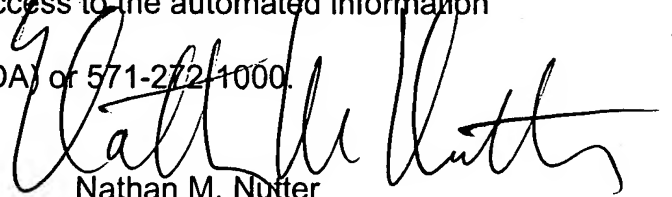
Applicant's arguments with respect to claims 14-39 have been considered but are moot in view of the new grounds of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan M. Nutter whose telephone number is 571-272-1076. The examiner can normally be reached on 9:30 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1711

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Nathan M. Nutter
Primary Examiner
Art Unit 1711

nmn

14 february 2007